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10/551,117	09/28/2005	Giovanni Maria Carlomagno	021500-141	4346
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EXAMINER WILSON, DEMARIS R				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

**Office Action Summary****Application No.**

10/551,117

**Applicant(s)**CARLOMAGNO, GIOVANNI  
MARIA**Examiner**

DEMARIS R. WILSON

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/12/2006, 9/28/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-12, in the reply filed on 3/31/2008 is acknowledged. The traversal, as recited in the reply on page 2, is on the ground(s) that

- i. "However, the Official Action's characterization of the corresponding technical features is inaccurate as it fails to take into consideration the feature of the spaced plenums extending transversely to the direction of the conveyance of the bent glass sheet. This feature, common to the claim groupings, is not disclosed by McMaster," and that
- ii. "The embodiment shown in Figs. 5 and 6 of McMaster pertains to an apparatus for quenching a bent glass sheet. As shown in Fig. 6, the bent glass sheet moves in a direction perpendicular to the plane of the paper (i.e., in and out of the plane of the paper). The bent glass sheet is formed around the axis of curvature that also extends in this direction. The plenums 34 extend in a direction parallel to the axis of curvature (i.e., in and out of the plane of the paper; Column 7, Lines 48- 52). Thus McMaster does not disclose the corresponding technical feature of the plenums extending transversely to the direction of the conveyance of the sheet of glass," as well as,
- iii. "However, the International Searching Authority did not find that the claim groupings lack unity of invention. The Official Action here provides no explanation for why a different conclusion on the very same issue is appropriate," and thereby concludes with
- iv. "For these reasons, withdrawal of the lack of unity requirement is respectfully requested."

2. This is not found persuasive because the apparatus and method and production line for producing bent glass sheet as instantly recited lacks corresponding special technical features. Applicant's traversal, as noted in the first indention, is attempting to identify features that are instantly claimed that applicant however considers to be not disclosed by McMaster.

It is considered that McMaster does disclose having plenums extending in a transverse manner (see figure 2). It is further noted that because this is an apparatus the features as instantly claimed still read on such a disclosure as all claims drawn to an apparatus will be interpreted as broadly as reasonably possible per changes of orientation (i.e. changes of shape) of elements known for specific functioning and/or producing known results would not establish a special technical feature. Furthermore, with respect to the second indentation, the prior art is not limited to preferred embodiments, as the features of the apparatus are considered disclosed and further known in the prior art. Additionally, as noted hereinabove, McMaster does disclose and reasonably suggests having plenums oriented in a transverse manner (see column 4 lines 20-25).

3. In further regards to indentions two and three, the special technical feature indicated by applicant is disclosed in McMaster's figure 2. The expression "special technical features" is defined as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art. As this technical feature is shown in McMaster, unity is lacking. Furthermore, the International Searching Authority is considered to not be a sole reliance for the establishing of patentability and further the establishing of unity of invention. The International Searching Authority supports the holding of lack of unity *a posteriori* in that a lack of inventive step was indicated and that the absence of a lack of unity determination by the International Searching Authority does not prevent the lack of unity from being made in the instant application.

4. It is considered that applicant's arguments have been substantially drawn to the inventions having a special technical feature, as the special technical feature (i.e. plenums

extending transversely) was noted as not being disclosed by the McMaster reference. However, McMaster does disclose and reasonably suggest having even this feature. Accordingly, the requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

5. Claim 1 is objected to because of the following informalities: In line 6, the term "elongate" is considered grammatically incorrect. It is considered that applicant intended to have "elongated." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 12, 8 and 1,3 and 5 as well as 2, 4, 6-7, 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to how the recitation and phrase "e.g. it is composed of polytetrafluoroethylene" distinctly limits the instant apparatus. With respect to claim 8, it is considered that it is unclear as to how the upper blasthead can have connecting surfaces inclined downward towards the centerline while the inclined surfaces of both the upper and lower blastheads diverge away from the centerline. That is, it is expected that in order for the upper blasthead/plenum to have a diverging away from the centerline feature that the inclined surfaces for the upper blasthead are inclined upwards as opposed to downwards.

8. Additionally, the last line of claim 1 indicates the "the array of quench nozzles is curved in at least one direction". However, the claims require an array above the path and below the path- it is unclear if the last line refers to the one above or below or both (this also applies to claim 2). In claim 2, it is unclear what is intended by "in the direction of elongation of the plenums". In claim 3, it is unclear what is intended by "in the corresponding". In claim 5, it is unclear what is intended by the profile being fixed and the local curvature of the glass being changeable at any fixed point as it is conveyed. That is, which local curvature is to be matched?

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMaster et al. <US 4515622>. McMaster discloses (see "disclosure of the invention" beginning in column 2 and columns 5 and 6) an improved glass sheet quench for tempering glass sheets having (see figures 2 and 4)

v. A means (22) of conveying the sheet along a predetermined path through the apparatus, and a pair of blastheads (26, 28) for quenching the sheet with jets of quench gas,

- vi. The blastheads comprising upper (26) and lower (28) blastheads arranged in opposed relationship (see figure 1) above and below the predetermined path, with
- vii. Each blasthead comprising a plurality of spaced elongated plenums (34) for supplying quench gas to an array of quench nozzles (46) from which the jets of quench gas issue, further with
- viii. The length of the quench nozzles exceeding their diameter and the quench nozzles of each plenum being mutually inclined to provide diverging jets of quench gas, wherein
- ix. The plenums could extend transversely (i.e. across) the direction of conveyance of the bent glass sheet and the array of quench nozzles is curved in at least one direction (see figure 4 and 6).

11. Although McMaster fails to expressly (see column 4 lines 20-26) disclose a glass orientation relationship between the plenum housing, the impingement locations (i.e. the alignment of the plenums as being transverse), and direction of conveyance, it is considered that it would have been obvious to one of ordinary skill in the art at the time of invention to have oriented the plenums transversely to the direction of conveyance to maximize the area of application of quench gas jet streams (i.e. impingement locations) to temper the glass sheets.

12. Regarding claims 2-5, it is considered that McMaster clearly discloses in alternate embodiments having plenums with a curved profile in the direction of conveyance with the

curvature corresponding to an average local curvature of the bent glass (see figures 2, 3, and 6).

13. Regarding claims 7-8, it is considered that McMaster's apparatus has a centerline parallel to the direction of conveyance with plenums of the lower blasthead being connected to each other by connecting surfaces that are also inclined downwards. The inclination for the upper plenums is expected to be conversely corollary to that of the lower.

14. Regarding claim 9, McMaster's apparatus has bores (56) on a nozzle bar (54) (see column 6 lines 31-41).

15. Regarding claims 6 and 10-11, McMaster fails to expressly disclose having an arrangement of blastheads movable towards and away from each other as well as having bores of cylindrical and conical shape. McMaster does reasonably suggest such limitations in his quenching apparatus as it would be a readily apparent rearrangement of parts to one of ordinary skill in the art. With respect to the arrangement of blastheads, it is considered that McMaster's blastheads are arranged in a manner where the blastheads are moved away from a centerline to blow quench gas at substantially similar angles from said centerline (see column 6 lines 54-60 and figure 4). Because these blastheads are seemingly in an arrangement where alternating blastheads blow quench gas at equal angles from a centerline, one of ordinary skill would appreciate not only changing the angles at which the quench gas is blown but further having the blasthead nozzles movable toward and away from each other. Therefore, it is considered that it would have been obvious to one of ordinary skill in the art at the time of invention to have rearranged McMaster's blasthead nozzles to allow for a movement in a toward and away from each blasthead nozzle manner to change



the angle of quench gas being supplied to temper the glass sheet. Furthermore, absent persuasive evidence that this particular feature warrants unexpected results that have not been suggested by the prior art of record or considered readily apparent to one of ordinary skill in the art, rearrangement of parts would not establish patentability in the claim(s).

16. With respect to claims 10-11, having bores being of cylindrical and/or conical shape is considered to not depart from the spirit and scope of McMaster's disclosure and would be an obvious change of shape. Absent persuasive evidence that this particular feature warrants unexpected results that have not been suggested by the prior art of record, design choices for determining shape configurations in this instance are not considered patentably distinct features as McMaster's apparatus has cylindrical bores.

17. Regarding claim 12, it is considered that the nozzle bar can be made of any material as long as it fulfills the required process conditions. Anyone skilled in the art is capable of selecting the appropriate material. Properties of materials, let it be metals, ceramics or polymers can be found in handbooks. Therefore, the subject-matter of claim 12 does not establish patentability over the prior art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEMARIS R. WILSON whose telephone number is (571)272-6377. The examiner can normally be reached on 9-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. R. W./  
Examiner, Art Unit 1791  
7/15/2008

/Richard Crispino/  
Supervisory Patent Examiner, Art Unit 1791